

Claims

What is claimed is:

- 1 1. In an information handling system, a method for selectively discharging a
2 dual battery system operable to provide electrical energy to an information
3 handling system device, the method comprising:
4 discharging a secondary smart battery included in the dual battery
5 system, wherein the secondary smart battery having a sufficient amount of
6 the electrical energy is housed in a removable media of the device; and
7 discharging a primary smart battery included in the dual battery system
8 in response to the discharging of the secondary smart battery to a threshold
9 level, wherein the primary smart battery has a sufficient amount of the
10 electrical energy.

- 1 2. The method of claim 1, wherein the primary smart battery continues to
2 provide the electrical energy upon removal of the secondary smart battery.

- 1 3. The method of claim 1, wherein the primary smart battery is different than the
2 secondary smart battery, wherein the primary smart battery has a higher
3 voltage rating compared to the secondary smart battery.

- 1 4. The method of claim 1, wherein the discharging of the secondary smart
2 battery is in response to a loss of AC power source providing the electrical
3 energy to the device.

- 1 5. The method of claim 1, wherein the discharging of the secondary smart
2 battery is selected to occur prior to the discharging of the primary smart
3 battery.

- 1 6. The method of claim 1, wherein the threshold level is defined to be
2 approximately equal to 3% of relative state of charge (RSOC).
- 1 7. The method of claim 1, wherein the sufficient amount is greater than 3% of
2 relative state of charge (RSOC).
- 1 8. The method of claim 1, wherein the sufficient amount is approximately equal
2 to 80% of relative state of charge (RSOC).
- 1 9. The method of claim 1, wherein the discharging of the primary and secondary
2 smart batteries is selectively controlled by a controller, wherein the controller
3 controls the discharging by controlling an operation of a discharge_primary
4 switch and a discharge_secondary switch.
- 1 10. The method of claim 9, wherein the controller switches the discharging from
2 the secondary smart battery to the primary smart battery in response to a
3 removal of the secondary smart battery.
- 1 11. The method of claim 9, wherein the controller switches the discharging from
2 the secondary smart battery to the primary smart battery in response to a
3 disablement in the discharging of the secondary smart battery.

1 12. A power supply system for providing power to an information handling system
2 device, the power supply system being connectable to an AC adapter for
3 deriving power from an AC power source, the power supply system
4 comprising:

5 a dual battery system including a primary smart battery and a
6 secondary smart battery, wherein the secondary smart battery is selectable to
7 be discharged prior to the primary smart battery in response to a loss of the
8 AC power source, wherein the secondary smart battery is housed in a
9 removable media of the device;

10 a primary discharge switch operable to receive power from the primary
11 smart battery, the primary discharge switch being operable to control
12 discharging of the primary smart battery;

13 a secondary discharge switch operable to receive power from the
14 secondary smart battery, the secondary discharge switch being operable to
15 control discharging of the secondary smart battery;

16 a primary discharge enable switch operable to control the primary
17 discharge switch from receiving the power from the primary smart battery, the
18 primary discharge enable switch being responsive to an operating condition
19 of the secondary smart battery;

20 an AC power source switch operable to select the AC power source to
21 provide the power to the device in response to an availability of the AC power
22 source; and

23 a battery charger operable to receive power from the AC adapter and
24 provide the power to a selected one in the dual battery system.

1 13. The power supply system of claim 12, wherein the primary smart battery
2 continues to provide the power upon removal of the secondary smart battery.

- 1 14. The power supply system of claim 12, wherein a controller included in the
2 devices controls the primary discharge switch, the secondary discharge
3 switch and the primary discharge enable switch in response to the loss of the
4 AC power source.
- 1 15. The power supply system of claim 14, wherein the controller closes the
2 secondary discharge switch, opens the primary discharge switch and opens
3 the primary discharge enable switch in response to the loss of the AC power
4 source.
- 1 16. The power supply system of claim 14, wherein the controller opens the
2 secondary discharge switch, closes the primary discharge switch and closes
3 the primary discharge enable switch in response to a removal of the
4 secondary smart battery or a depletion of power provided by the secondary
5 smart battery to a predefined power level or a voltage of the secondary smart
6 battery dropping below a predefined voltage level.
- 1 17. An information handling system comprising:
2 a processor;
3 a system bus;
4 a memory coupled to the processor through the system bus;
5 a removable media coupled to the processor and memory through the
6 bus, the removable media operable to process input and outputs;
7 a power supply system operable to provide power to the processor, the
8 bus, the removable media and the memory, the power supply system being
9 connectable to an AC adapter for deriving power from an AC power source;
10 a controller coupled to the processor and memory through the system
11 bus, the controller operable to control the power supply system; and
12 wherein the power supply system includes:

1 a dual battery system including a primary smart battery and a
2 secondary smart battery, wherein the secondary smart battery is
3 selectable to be discharged prior to the primary smart battery in
4 response to a loss of the AC power source, wherein the secondary
5 smart battery is housed in the removable media;

6 a primary discharge switch operable to receive power from the
7 primary smart battery, the primary discharge switch being operable to
8 control discharging of the primary smart battery;

9 a secondary discharge switch operable to receive power from
10 the secondary smart battery, the secondary discharge switch being
11 operable to control discharging of the secondary smart battery;

12 a primary discharge enable switch operable to control the primary
13 discharge switch from receiving the power from the primary smart
14 battery, the primary discharge enable switch being responsive to an
15 operating condition of the secondary smart battery; and

16 a battery charger operable to receive power from the AC
17 adapter and provide the power to a selected one in the dual battery
18 system.

1 18. The system of claim 17, wherein the primary smart battery continues to
2 provide the power upon removal of the secondary smart battery.

1 19. The system of claim 17, wherein the controller controls the primary discharge
2 switch, the secondary discharge switch and the primary discharge enable
3 switch in response to the loss of the AC power source.

1 20. The system of claim 17, wherein the controller opens the secondary
2 discharge switch, closes the primary discharge switch and closes the primary
3 discharge enable switch in response to a removal of the secondary smart

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4 battery or a depletion of power provided by the secondary smart battery to a
5 predefined power level or a voltage of the secondary smart battery dropping
6 below a predefined voltage level.